

Pediatrics

HUNGARY

PATAKI, Lajos, Dr, KAISER, Gabriella, Dr, VIRAG, Istvan, Dr, ROMAN, Ferenc, Dr; Medical University of Szeged, Pediatric Clinic (director: SODA, Domokos, Dr) (Szegedi Orvostudomanyi Egyetem, Gyermekklinika), and National Blood Transfusion Service, Branch Center (head: GAL, Gyorgy, Dr) (OVSZ -- Orszagos Vertranszfuzios Szolgalat --, Alkozpon), Szeged.

"New Therapeutic Possibility for the Hemolytic Disease of Newborn Caused by Rh Iso-Immunization. The Use of Rh-Positive Blood Based on the Testing of the Free Anti-D Antibody of the Newborn. (Preliminary Communication.)."

Budapest, Orvosi Hetilap, Vol 108, No 8, 19 Feb 67, pages 352-354.

Abstract: [Authors' Hungarian summary] 1) The free anti-D antibody can be bound to Rh-positive blood; when the exchange transfusion is continued with Rh-negative blood, the bound antibody can be removed more effectively. 2) When anti-D antibody is absent, hyperbilirubinemia does not always develop in spite of a positive direct Coombs reaction. In these cases, an exchange transfusion can be avoided. 3) In the case of hyperbilirubinemia with a positive direct Coombs reaction but absence of free anti-D antibody, the exchange transfusion can be carried out with Rh-positive blood as well. 4) It seems probable that the indications and performance of exchange transfusions in cases of Rh incompatibility will be modified, in the future, by testing for the presence of free anti-D antibodies in the circulation of the newborn. 1 Hungarian, 11 Western references.

KAISER, Gerhard

Notes on the treatment of pseudarthrosis. Chir. narz. ruchu ortop.  
polska 27 no.2:217-224 '62.

1. Z Kliniki Ortopedycznej AM w Erfurcie Dyrektor: prof. dr G. Kaiser.  
(PSEUDARTHROSIS ther)

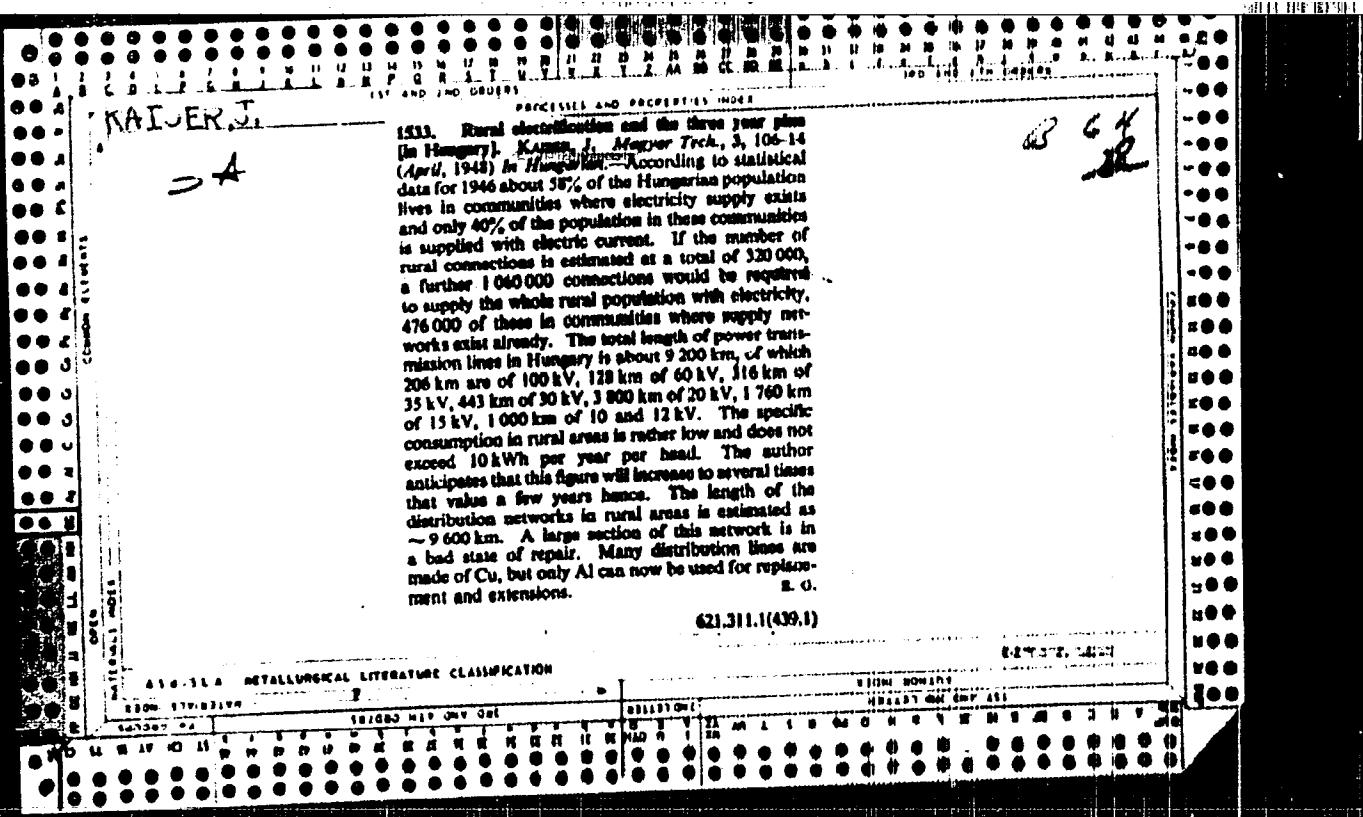
KAISER, H., Inz.

Unit system of fixtures in the German Democratic Republic.  
Stroj vyr 12 no.10;731-733 O '64.

1. VEB Verrichtungsbau, Hohenstein, German Democratic Republic.

KALISER, Leaven (obituary)

Contest in big city for the Pelecanus County school students arranged by the Elgin-Wood County Board of Education, Meeting # no.5:63 2-0  
1942.



"APPROVED FOR RELEASE: 08/10/2001

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KAISER, M.

The bell and hopper arrangement of blast furnaces, p. 193

PROBLEMY PROJEKTOWE HUTNICTWA. (Biuro Projektow Przemyslu Hutniczego, Biuro Projektow Przemyslu Stalowego i Biuro Projektow Przemyslu Metalowego) Czestochowa, Poland  
Vol. 6, no. 7, July 1958

Monthly list of East European Accession (EEAI) LC., Vol. 9, No. 1, Jan 1960

Uncl.

KAISER, M.

The hoisting installations for repairing blast furnaces. p. 272.

PROBLEMY PROJEKTOWI WYTWÓRZENIA. (Biuro Projektow Przemysłu Hutańczego,  
Biuro Projektow Przemysłu Stalowego i Biuro Projektow Przemysłu  
Metalowego) Gliwice. Poland.  
Vol. 6, no. 9, Sept. 1958.

Monthly List of East European Accessions (ECAI) LC, Vol. 9, no. 2, Feb. 1959.

Uncl.

KAISER, M.

Damages and repairs of steel constructions of crane tracks and bridges. p. 33

PROBLEMY PROJEKTOWE HUTNICTWA. (Biuro Projektow Przemyslu Hutniczego, Biuro Projektow Przemyslu Stalowego i Biuro Projektow Przemyslu Metalowego) Czliwice, Poland, Vol.7, no. 2, Feb. 1959

Monthly list of East European Accession (EEAI) LC., Vol. 9, No. 1, Jan 1960

Uncl.

28(2)

H/007/60/01/002/013  
D0018/D3001AUTHOR: Kaiser, Mihály, Electrical Engineer

TITLE: About the Digital Computer

PERIODICAL: Elektrotehnika, 1960, Nr 1, pp 22-34

ABSTRACT: The article contains a historical review of the development of digital computers. After defining some common technical terms used in connection with computers, the author describes the "M-3" digital computer, which was constructed on Soviet designs by the MTA Kibernetikai Kutató Csoportja (MTA Cybernetics Research Group). The "M-3" has 31 bits. Of these, 1 represents the sign, the following 6 record the instructions and twice 12 bits serve for storing the first and the second address. The arithmetical unit consists of four registers. The "A" register stores the addend, the subtrahend, the multiplicand and the divisor. The "B" register stores the addend, the minuend the multiplier and the dividend. This re-

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About the Digital Computer

gister records the results of additions, subtractions and multiplications. The "C" register stores the multiplier, the quotient and the product of the logical multiplication. The "D" register records the carry-overs. The results appear in both the "B" and the "C" register. Examples of all the 5 operations done by the computer are given. Figure 1 shows the schematic structure of the computer. The control unit is made up of a local programing unit, an operational programing unit, a starting and a selecting register and an asynchronous impulse distributor. The computer's storing unit contains a magnetic drum, made up of a copper cylinder covered with a Ni-Co layer. The drum is driven by an asynchronous motor, at 3,000 rpm. Its mantle contains 40 zones, including one marker zone, one zone for storing the 0 sign, 31 for storing the information and 7 as reserve.

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#### About the Digital Computer

The "T-50" band reading device used in the computer comprises a reading mechanism, a spreader and a magnetic coil. The first two are driven by an electric motor. The magnetic coil has a potential of 60 v at one end, the other end is connected to the spreader by 5 of the 6 contacts of the latter. The sixth of these contacts is a synchronizer. The computer requires the following voltages: 1) 3-phase 220 v (+5 - -15%), 50 cycles (-2%), approximately 15 kw, 2) Internal 3-phase 240 v, 200 cycles, approximately 12 kw, permissible fluctuation of voltage and frequency -50%, in case of permitted load change  $\pm 15\%$ , 3) 6-v heating for the electronic tubes and 4) various dc voltages. The input unit is provided with energy by a 3-member aggregate comprising a 14-kw, 220-v, 50-cycle asynchronous motor, a 4.8-kw,  $U_n = 230$ -v dc generator and a 14-kw,  $U_n = 240$ -v,  $\checkmark$

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About the Digital Computer

200-cycle ac generator. The speed of the dc generator can be varied between 1500 and 1800 rpm. A number of stabilizers and rectifiers are also employed. A general description of the computer's operation and the solution of an equation as an example are given. There are 13 figures and 4 references, of which 2 are Hungarian, 1 Soviet and 1 English.

ASSOCIATION: Villamos Energetikai Kutató Intézet (Electric Ener-  
getics Research Institute)

SUBMITTED: January 1960

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KAISER, Mihaly

Computation of the load distribution of power plants on the M-3 computing machine. Elektrotechnika 55 no.1:13-17 Ja '62.

1. Villamos Energetikai Kutato Intezet.

KAISER, Mihaly, -okleveles villamosmernok

~~Calculating single short circuits by computers.~~ Elektrotechnika  
56 no.3:102-106 Mr '63.

1. Villamos Energetikai Kutato Intezet tudomanyos munkatarsa,  
Budapest, VI., Rudas Laszlo u.27.

BOROVSZKY, L.; GERTLER, J.; KAISER, M.; VAMOS, T., dr.

Data processing experimental device for power plants. Meres automat  
13 no.2/3:67-69 '65.

1. Electric Power Industry Research Institute, Budapest.

DRAHNY, Milos; LEBL, Pavel; MARTANCIK, Jozef; STIRSKY, Pavel; BERES, Julius;  
KAISET, Pavel

Putting the A 1 nuclear pwer station into operation. Jaderna energie  
10 no. 5:173 My '64.

1. Research Institute of Power Engineering, Prague.

AUTHOR: Kaiser, P.A. 180

TITLE: Discussion on the technological problems of concrete.  
(Diskussiya po problemam tekhnologii betona).

PERIODICAL: "Beton i Zhelezobeton" (Concrete and Reinforced Concrete);  
1957, No.3, pp.109-110 (U.S.S.R.)

ABSTRACT: Report of a symposium held by the Moscow Branches of the  
Scientific and Technical Societies of the Industry for  
Building Materials and of the Building Organisations,  
which was held in Moscow in January, 1957. Advances in  
technology and the solution of various technical problems  
were discussed, the properties of concrete used for  
reinforced concrete products, coarse aggregates for  
heavy concretes, stiff concrete mixes for high-strength  
concrete, the acceleration of the hardening of concrete.

KAISER, R.

Swagging and equalizing saw teeth. Tr. from the German. p. 7

DRVNA INDUSTRIJA. (Institut za drvno-industrijska istraživanja) Zagreb, Yugoslavia  
Vol. 10, no. 1/2, Jan./Feb. 1959

Monthly list of East European Accessions (EEAI) LC. Vol. 8, no. 9, Sept. 1959

Uncl.

KAISER, T.

AGRICULTURE

PERIODICAL: AZ ERDO. Vol. 7, no. 11, Nov. 1956

Kaiser, T. A remark on forest evaluation p. 433

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2,  
February 1959, Unclass.

KATSER, V.

"May 1", P. 257. (TECHNICKA PRACA, Vol. 4, No. 5, May 1954, Bratislava,  
Czechoslovakia)

SO: Monthly List of East European Accessions, (ETAI), LC, Vol. 4, No.1,  
Jan. 1955, Incl.

KAIEROVA, A.

Good work of "Leninists" and railroad men at Plzen. p. 198.  
ZELEZNICE, Prague, Vol. 4, no. 8, Aug. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6,  
June 1956, Uncl.

KAIEROVA, A.

Suggested improvement which did not meet with understanding. p. 261.  
ZELEZNICE, Prague, Vol. 4, no. 10, Oct. 1954.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6,  
June 1956, Uncl.

SIPOVSKIY, P.V.; KAISHAURI, N.L.

Statistical data on diseases of the blood system in Leningrad  
from 1952-1959. Probl.gemat.i perel.krovi 5 no.619-13 Je '60.  
(MIRA 13:12)  
(LENINGRAD—BLOOD—DISEASES)

KAISHEV, I.A., gornyy tekhnik

Upraise mining by means of a suspended scaffold. Gor. zhur.  
(MIRA 14:1)  
no. 1:77-78 Ja '61.

1. Nikitovskiy rtutnyy kombinat, Nikitovka, Stalinskoy obl.  
(Mining engineering--Equipment and supplies)

*KAISHEV KRUM*

BULGARIA/ Chemical Technology - Chemical Products and Their  
Application. Treatment of Natural Gases and Petroleum.  
Motor and Jet Fuels. Lubricants.

I-8

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2541  
 Author : Kaishev Krum  
 Inst : -  
 Title : Studies on Dehydration of Bulgarian Petroleum.  
 Orig Pub : Godishnik Khim.-tekhnol. in-t, 1955 (1956), 2, No 2, 1-11.

Abstract : Laboratory experiments on thermal and thermochemical dehydration of Bulgarian petroleum have shown that thermal treatment, at 120-150°, can break a stable emulsion but it does not ensure a complete dehydration of the petroleum; the latter is achieved only by addition of a de-emulsifying agent of the type of Batum neutralized black reagent (NChK). Sulfonation of the kerosene-gas oil fractions of Bulgarian petroleum yielded a de-emulsifying agent which approximates, in efficacy, the standard NChK manufactured in USSR.

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*KAISHEV K*

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Country : Bulgaria H-23  
 Category : Chemical Technology. Chemical Products and Their Applications--Chemical processing of natural gases  
 Abs. Jour. : and petroleum. Motor and rocket fuels. Lubricants.  
 Referat Zhur--Khim., No 11, 1959, 40048

Author : Kaishev, K.  
 Institut. : Bulgarian Chemical Engineering Institute  
 Title : Investigation of Bulgarian Petroleum Crude and of Methods for Its Rational Refining

Orig Pub. : Godishnik Khim-Tekhnol Inst, No 1, 99-197, 1956 (1957)

Abstract : Bulgarian crude (BC) is of the heavy asphaltic type, low in sulfur and in paraffins. Characteristics: initial bp 215°, does not contain a gasoline fraction, 12% kerosene (bp 200-300°), kerosene-gas oil fraction 25% (bp 200-350°), oil fractions 45% (bp 350-450°), tar [asphalt] 30% (based on the wt of the crude). BC contains primarily naphthenic and aromatic hydrocarbons, represented by 2, 3, and 4-ring compounds with a small number of C atoms in the side chains; the length of the side chains increases with increasing bp of the fractions. Because of its high aromatic content the kerosene fraction is unsuited for illumination use but in

Card: 1/3

Kaishev, K.

## Distr: 4E3d

High-boiling oil fractions from Bulgarian petroleum for tractor and Diesel lubricating oils, Krum Kaishev. Khim. Ind. (Sofia) 29, No. 2, 10-13(1967).—The fraction investigated, b. 430-530°, was purified by acid contact, selective extn. (with furfural), and simple adsorption; 90% H<sub>2</sub>SO<sub>4</sub>, 5% based on raw materials; with a contact time of 30 min. at 60° was the acid-contact treatment. This refined oil was treated with 6% bleaching clay (I) at 230-40°. Freshly distd. furfural (II) at a wt. ratio of 2:1 and 3:1, by using triple extn. at 90° and 60°, was the selective extn. method. II was removed initially from the raffinate layer by steam distn. and later *in vacuo*. The refined raffinate layer was treated with 6% I at 130-200°. Simple adsorption refining was accomplished at room temp. over silica gel with a grain size of 1-2 mm. Prior to this, the raw material was dissolved in benzene "Galosha" at a ratio of 1:2, which assures a kinematic viscosity of 20° of 1.75. The various refined samples together with an unrefined sample and "Avitol 6" (the control) were tested. Mol. wt., d., n, kinematic and relative viscosity, acid no., coking value, and corrosion power were recorded. Owing to a lack of the Pinkevich app., corrosion power was measured by the following method: into a dectd. amt. of each sample

were placed Pb strips of equal size and wt. and the sample was heated for 80 hrs. at 150°. The compartmentalized loss was an index of the corrosion power. Anticorrosive polyfunctional additive "AZNII-4" was evaluated. The author arrived at the following conclusion. Selective extn. with II gives products having a viscosity of 11.7 centistokes, gives products with the lowest n<sub>D</sub><sup>20</sup> and d<sub>40</sub><sup>20</sup>, and the highest viscosity index. Selective extn. with III at a ratio of 2:1 does not remove enough naphthenic and other org. acids since the acid nos. and corrosion power of these oils were significantly high. It is recommended that III extn. be followed by alkali treatment. Simple adsorption with silica gel gave the greatest lowering of the acid no., boiling value, and viscosity at 60° and 100°. Addn. of 0.4% "AZNII-4" does not give a sufficiently high anticorrosion power to the samples.

Yale Blip/Blood

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872

KALCHEV, K.

Catalytic cracking of high-boiling fractions of Tiulenov petroleum.

P. 31, (Tezhka Promishlenost) Vol. 6, no. 3, Mar. 1957, Sofia, Bulgaria

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

GERASIMOV, Mikhail prof., inzh.; KAISHEV, Krum, dots., kandidat tekhnicheski nauki; RUSCHEV, Dimitur, inzh.; GRUEVA, Todorka, inzh.

Obtaining absorbers through activating certain scoria and carried way elements from the Bulgarian coal. Tekhnika 10 no.9:12-15 '61.

(Coal) (Gases -Absorption and adsorption)

KAISHEV, Kr.; KIRII, N.; CHAIROV, T.

Studies on the properties of some Bulgarian clays as catalysts for the petroleum industry. Godishnik khim tekh 7 no.1/2:163-174 '60 [publ. '61].

KAISHEV, Kr.; KORDANOV, I.K.

Oxidizability of the hydrocarbons in the oily fractions of the  
Tyulenovo petroleum. Godishnik khim tekhn 7 no.1/2:225-230 '60  
[publ. '61].

KAISHEV, Kr., dots.; SHOPOV, D.; DAVIDOVA, N.

Chemical composition of the natural gasoline condensate from  
the gas deposits in the valley of Kamchiya River. Godishnik  
khim tekh 8 no.1:135-151 '61 [publ. '62].

1. Chlen na Redaktsionnata kolegiia, "Godishnik na khimiko-  
tekhnologicheskia institut" (for Kaishev).

KAISHEV, Kr., dots.; IORDANOV, Iord.; ZAKHARIEV, Iv.; ANDREEV, St.

Performance rate of the Tyulenovo diesel oil in a stand engine.  
Godishnik khim tekh 8 no.2:135-149 '61 [publ. '62].

1. Chlen na Redaktsionnata kolegiia, "Godishnik na khimiko-tehnologicheskiia institut" (for Kaishev).

GERASIMOV, M.; KAISHEV, Kr.; IORDANOV, I.; BEKAROVA, El.; MOMOV, Iv.;  
DOBREVSKI, Iv.; VULCHEV, D.

Physicochemical properties of petroleum of Dolni Dubnik, region of  
Pleven. Khim industriia 34 no.3:83-85 '62.

KAISHEV, Kr.; DOBREVSKI, Iv.; VULCHEV, D.

"Molecular sieves," a new means for the separation of molecular mixtures. Khim i industriia 34 no.3:104-106 '62.

KALISHEV, Kr., dots.; LUCHEV, St.

Refining of the rectified ethyl alcohol with silica gel.  
Godishnik khim tekhnika no.1:173-181 '61 [publ. '62].

KAISHEV, Kr., dots., k.t.n.; RUSKVA, E.; VULCHEV, D.

Formolite reaction used in quantitative analysis. Godishnik  
khim tekhn 9 no.2:39-43 '62 [publ. '63].

1. Chlen na Redaktsionnata kolegia i otgovoren redaktor,  
"Godishnik na Khimiko-tehnologicheskiia institut"  
(for Kaishev).

KAISHEV, Kr., dots., k.t.n.; IORDANOV, Iord.

Changes in the group chemical composition of motor oils  
from the Tyulenovo petroleum when used in testing engines.  
Godishnik khim tekh 9 no.2:171-176 '62 [publ. '63].

1. Chlen na Redaktsionnata kolegia i otgovoren redaktor,  
"Godishnik na Khimiko-tehnologicheskiiia institut"  
(for Kaishev).

KAISHEV, Kr., dots., k.t.n.; LUCHEV, St.; KISHEV, Il. GANOV, Iv.

Distribution of ethyl alcohol and volatile admixtures  
in liquid and vaporous phase at the continuous distillation  
of the molasses fermented must under production conditions.  
Godishnik khim tekh 9 no.2:221-234 '62 [publ. '63].

1. Chlen na Redaktsionnata kolegia i otg. redaktor,  
"Godishnik na Khimiko-tehnologicheskia institut"  
(for Kaishev).

KAISHEV, Kr., dots., k. t. n.; NIKOLOV, R.; KOLEVA, S.

Quantitative interpretation of chromatograms in gas chromatography and analysis of gas mixtures. Godishnik khim tekhnika no. 3:75-87 '62 [publ. '63]

1. Responsible Editor, "Godishnik na Khimiko-tehnologicheskii institut" (for Kaishev).

KAJSHEV, Krum; ANDREEV, Stoicho; ZAKHARIEV, Ivan; IORDANOV, Tordan

Changes in the physical and chemical indexes of the Tyulenovo  
Avtol-10 oil when used in a full-sized engine. Izv mekh  
selsko stop BAN 4 75-82 '63.

KAISHEV, Krum, dotsent; MARINOVA, Elena, inzh.; VULCHEV, Dimitur, inzh.

Influence of some factors on the carbamide deparaffination  
of the diesel fuel from the Dubnik petroleum. Tekhnika Bulg  
12 no.7:24-25 '63.

GERASIMOV, Mikhail, prof. dr inzh.; KAISHEV, Krum, dote.; RUSCHEV, Dimitur,  
dote. inzh.; SAVOV, Sava, inzh.

Adsorbents for mineral oils obtained by activation of the refuse  
and scoria from gas generators with fluidized bed. Tekhnika Bulg  
12 no.2:6-8 '63.

KAISHEV, Krum, dots.; SPASOV, Grozdan; LIUBENOV, Slavi; VULCHEV, Dimitur,  
inzh.

Possibilities of obtaining winter diesel fuel from the Dubnik  
~~petroleum~~. Tekhnika Bulg 12 no.4:5-7 '63.

KAISHEV, Kr.; MARINOVA, E.; VULCHEV, D.

Deparaffination of the diesel fuel from the Dubnitsk petroleum  
with solid carbamide. Khim i industriia 35 no.3:87-90 '63

KAISHEV, Kr.; VULCHEV, D.; IORDANOV, I.

Studies of the oil fractions of the Lubnik petroleum. Godishnik  
khim tekh 9 no. 1:189-201 '62 [publ. '63].

KALCHEV, K.; NIKOLOV, R.; KOLEVA, S.

On the quantitative interpretation of chromatograms  
in gas chromatography during gas mixture analysis.  
Doklady BAN 17 no.2:141-144 '64.

1. Submitted by Academician D.Ivanoff [Ivanov, D.].

GERASIMOV, M.M.; KAISHEV, K.P.; LAMBIYEV, Kh.D.

Preparation of rubrax from Bulgarian asphaltum oil. Khim.i  
tekh.topl.i masel 7 no.7:30-33 J1 '62. (MIRA 15:9)  
(Rubrax) (Bulgaria—Petroleum)

KAISHEV, P.

Problem for determining economically the most advantageous diameter of pressure tunnels  
for hydroelectric plants. p. 10.

Vol. 4, no. 1, Jan. 1955  
TEKHNIKA  
Sofiya, Bulgaria

SG; Eastern European Accession Vol. 5 No. 4 April 1956

KAISHEV, P.

KAISHEV, P. Research with models on hydraulic phenomena in water towers of hydroelectric-power stations. p.20.

Vol. 5, no. 2, Mar./Apr. 1956, TEKHNIKA, SOFIYA, BULGARIA.

SO: Monthly List of East European Accessions, (EEAL), 1C, Vol. 5, No. 10,  
Oct. 1956.

KAISHEV, P.

Conditions for stability of the fluctuating process in the water towers at  
water-power stations when additional water flows into the towers. p. III

KHIDROTEKHNIKA I MELIORACII. (Nauchno-tehnicheski siliuz v Bulgaria i  
Ministerstvo na elektrofikatsiiata i vodnoto stopenstvo) Sofia, Bulgaria.  
Vol.4, no. 4, 1959

Monthly List of East European Accessions (EEAI), IC, Vol. 8, No. 12,  
December 1959  
Uncl.

KNISHEV, P.

Hydrologic and climatic conditions of the highest zone of the Rila-Rhodope massif and their influence on the operation and type of hydrotechnic equipment.  
p. 17

HYDROLOGIA I METEOROLOGIA. (Ministerstvo na zemedelieto. Khidrometeorologichna sluzhba) Sofia, Bulgaria, No. 5, 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 12,  
December 1959  
Uncl.

KAISHEV, P., kand. na tekhn. nauki, inzh.; BATKOV, An., inzh.

Water resources of Bulgaria. Priroda Bulg 11 no. 1:8-15 Ja-F 62.

KAISHEV, Petur, kandidat na tekhnicheskite nauki; SHABAVSKI, Ivan, inzh.

Wind energy and possibilities of its utilization in electric power production. Elektroenergiia 12 no.11/12:28-31 N.-D '61.

KAISHEV, P.A., kand. na tekhn. nauki inzh.; BATKOV, An.T., inzh.

Underground hydroelectric-power plants. Priroda Bulg 10  
no.5:28-35 S-0 '61.

KAISHEV, P. A

Theory of the water towers in hydroelectric-power plants  
fed by two reservoirs. Izv Inst energ BAN 2:193-226 '62.

KAISHEV, Petur, k. t. n. inzh.

Hydraulic stability of water towers at the taking of their water for  
some other purposes. Khidrotekh i melior 7 no.4:114-116 '62.

KALISHEV, Petur A., k. t. n. inzh.; BATKOV, Anastas T., inzh.

Importance of water power for the electrification in Bulgaria.  
Khidrotekh i mehanika 8 no.1:19-21 '63.

KAISHEV, P., inzh., kand. na tekhn. nauki  
Hydrotechnic canals. Priroda Bulg 11 no. 6:57-63 N-D '63.

KAISHEV, P.

"Current density and overvoltage at the increase of spiral fronts in case of  
the electrocrystallization of silver."

IZVESTIJA. SERIJA FIZICHESKA, Sofiia, Bulgaria, Vol. 6, Jan./Dec. 1956  
(published 1957).

Monthly List of East European Accessions Index (EEAI), The Library of  
Congress, Volume 8, No 8, August 1959.

Unclassified

KAISHEV, P.

BULGARIA/Physical Chemistry - Electrochemistry.

b.

Abs Jour : Ref Zhur - Khimiya, No 12, 1958, 39050

Author : Kaishev, P., Mutafchiev, B., Nenov, D.

Inst : Bulg. AN

Title : Current Density and Overvoltage during the Growth of  
The Spiral Front in the Electro-Crystallization of  
Silver.

Orig Pub : Izv. Bulg. AN Otd. fiz-matem. i techn. n. Ser. fiz. 1957,  
6, 317-328

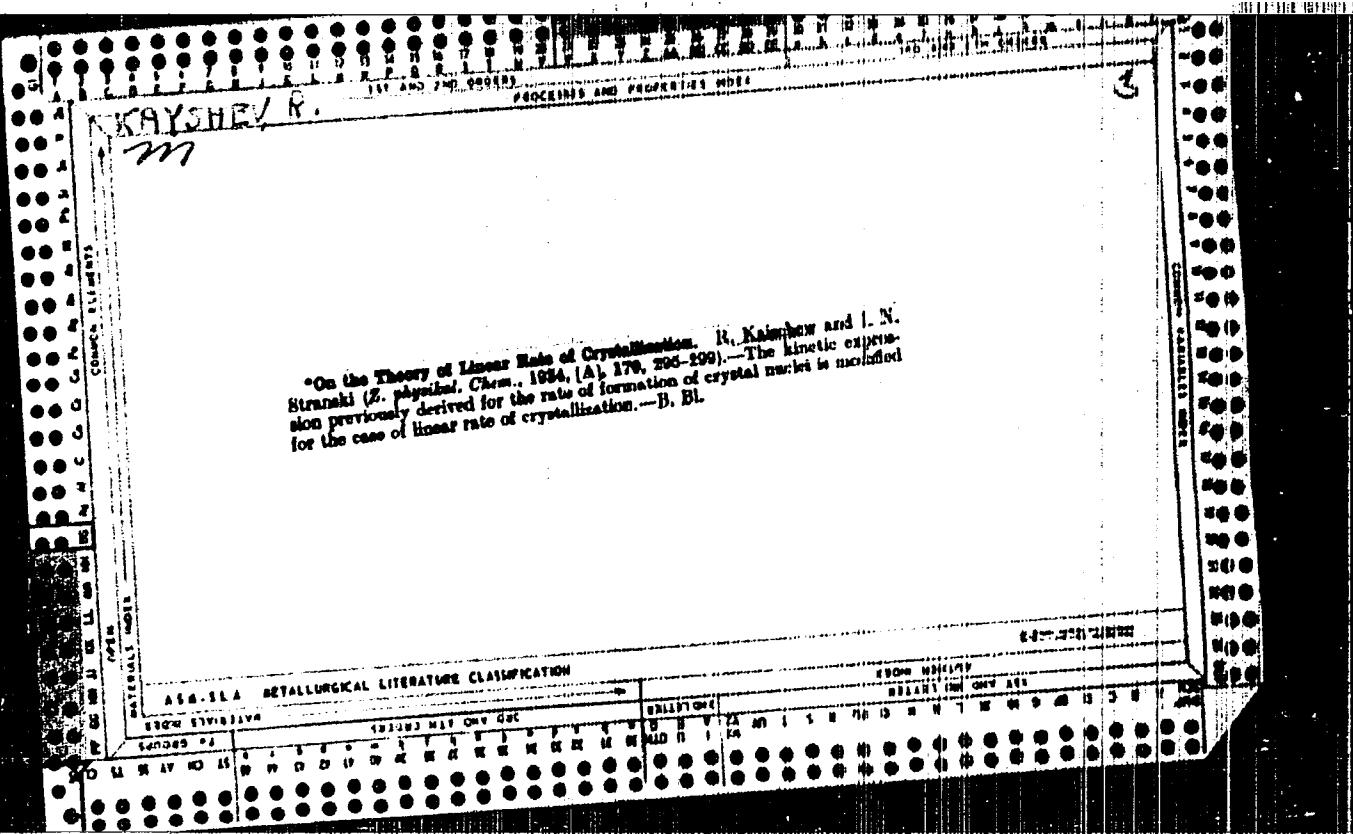
Abstract : A study was made on the relationship between current  
density and crystallization overvoltage in the elec-  
trolytical growth of silver crystals. The method is  
based on determining the shifting rate of the growing  
spiral fronts ( $U$ ), and calculating the true current  
density ( $i_o$ ), according to the equation:

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KAISHEV, P. I.; TODES, O. M.

"The kinetics of formation and destruction of aerosols."

report presented at the Fourth All-Union Conference on Colloidal Chemistry,  
Tbilisi, Georgian SSR, 12-16 May 1958 (Zembla, 1958, p. 671-9, '58, Tbilischi, A.B.)

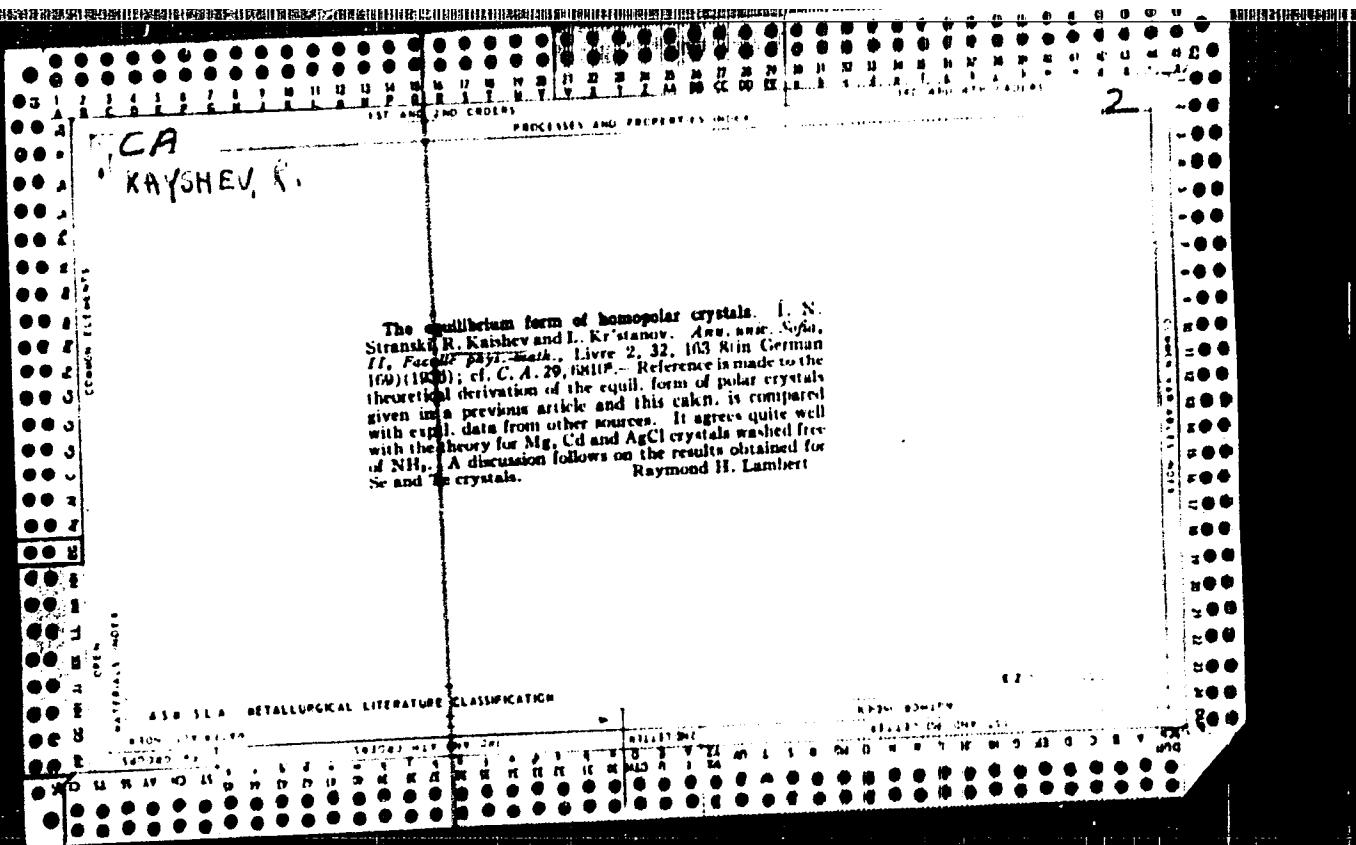


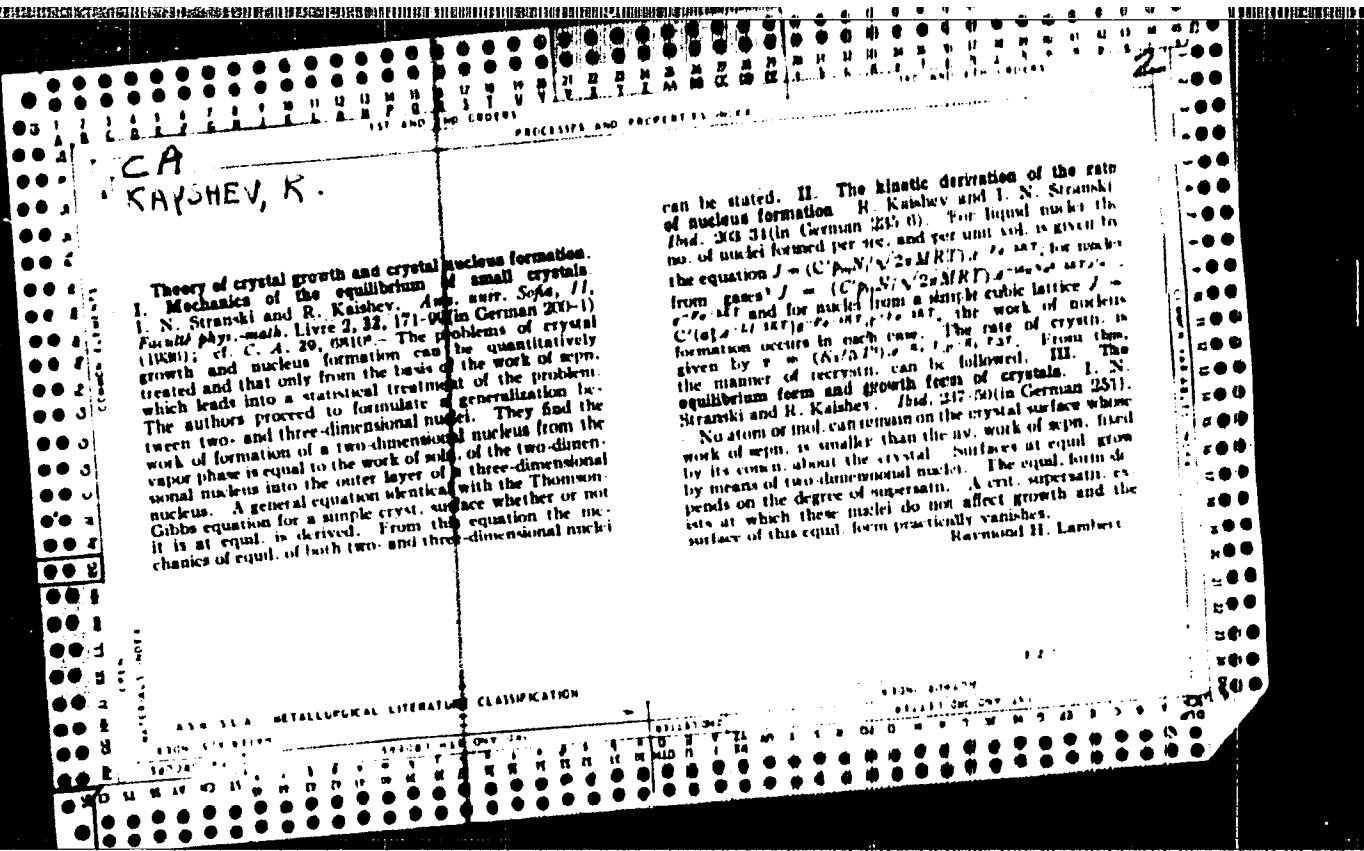
5

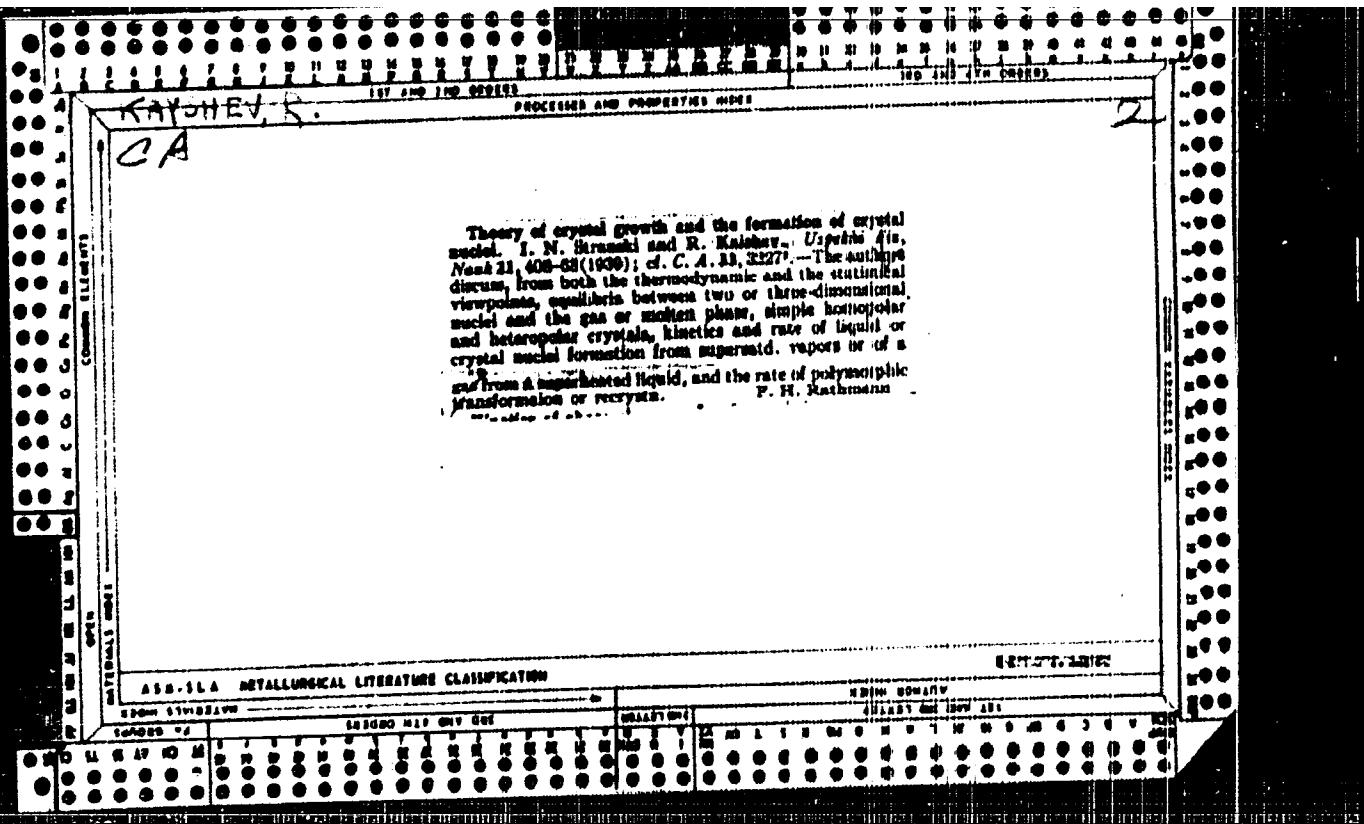
KAYSEH, R.

The ratio  $\lambda_1/\lambda_{\infty}$  for crystals and liquids. R. Kaishev, I. V. Stavrov and I. N. Strashik. *Zhur. sov. fizika*, **17**, 10; *Zhurn. fiz.-mat.*, **Livres 2, 32**, 133-134 (in German) [1952]. A rough reckoning of the ratio  $\lambda_1/\lambda_{\infty}$  of the mol. heat of vaporization to the mol. surface energy for ideal homopolymer crystals shows that its value is always greater than 2; i.e., the work of bringing an atom or mol. from the interior of the crystal to the surface is smaller than that for completely removing it from the surface. Since the structure of a liquid somewhat resembles that of a crystal, this relation should also hold. If so, Soret's law cannot hold, at least at temps. far from the crit. temp. H. H. L.

ASD SEA METALLURGICAL LITERATURE CLASSIFICATION







## PROPERTIES AND PROBLEMS MORE

KAISHEV, R.

*C.A.*

Equilibrium in heterogeneous systems involving phases of small dimensions. N. Kaishev. *Atomnaya Energiya*, Sofia, Period. phys.-mekh., 48, Livre 2, 177-98 (1943-44) (in Bulgarian). — The basic development given previously (Stranaki and Kaishev (*C.A.* 39, 2241)) is supplemented by statistical treatment leading to an expression for the equil. vapor pressure  $p$  of a crystal of  $N_A$  elements,

$$\ln(p/T) = -\frac{1}{kT}(\mu^* + \delta T_{\text{melt}})/4N_A \approx d\mu/dN_A$$

where  $\mu^*$  = work of vaporisation of the whole crystal at abs. zero,  $\mu$  = the av. oscillation vol. of the  $i$ th element,  $\mu$  its thermodynamic potential. This permits detn. of the equil. shape of the crystal, by varying the surface area in such a way that  $d\mu/dN_A$  becomes equal for all surfaces; the procedure is analogous to that of Stranaki (*C.A.* 29, 2241). For the equil. between two condensed phases one of which is stable at a lower and the other at a higher temp., an expression is derived that corresponds to the — Thomson-Ostbe equation and leads to the well-known expression for the melting temp. of a very small crystal within a melt.

N. Todor

2

## A.S.E.-I.I.A. METALLURGICAL LITERATURE CLASSIFICATION

6-27-1972, 144-121

IRON STEELIRON SILVER	SILVER IRON COPPER MAGNESIUM ALUMINUM ZINC LEAD TIN MANGANESE CHROMIUM MOLYBDENUM TUNGSTEN NIOB	IRON STEEL		COPPER MAGNESIUM ALUMINUM ZINC LEAD TIN MANGANESE CHROMIUM MOLYBDENUM TUNGSTEN NIOB		COPPER MAGNESIUM ALUMINUM ZINC LEAD TIN MANGANESE CHROMIUM MOLYBDENUM TUNGSTEN NIOB		COPPER MAGNESIUM ALUMINUM ZINC LEAD TIN MANGANESE CHROMIUM MOLYBDENUM TUNGSTEN NIOB	
		IRON STEEL	IRON STEEL	IRON STEEL	IRON STEEL	IRON STEEL	IRON STEEL	IRON STEEL	IRON STEEL

KHYSHEV, R.

**Electrochemical potential of a small electrode.** R. Katshev. *Zhurnal fiz. SSSR*, Faculty phys.-mat. M. L. Tverskogo, No. 2, 21-22 (1946-1947). The electrochem. potential of a small metal electrode can be calc'd. on the basis of the Thomson-Gibbs equation for the vapor pressure of small drops or crystals by substituting in the equations  $R T \ln(p/p_0) = 2\pi r g r$ , for the first half of the equation, the expression  $a^2 P(E_a - E_s)$ , which gives the decrease of free energy in the transference of a mol. from the small to the large electrode. The last half of the equation can be evaluated on the basis of the work involved in crystal growth. A math. analysis and explanation of the development are presented. Clyde McKinley

КАЧЕНИЯ, Р.

The equilibrium form and the growth and disintegration mechanism of homopolar crystals. R. K. Kirby, *J. Am. Chem. Soc.*, **66**, 1401 (1944). In order to test the theory of Stranski, et al., dealing with crystal growth and decline, K. studied hexamethylene tetramine crystals. These form a highly sym. vapor-centered cubic lattice and have a measurable vapor pressure at low temps. The (111) plane is the fastest-growing plane of the crystal; the reason for this is explained. The final form of the crystal is always rhombo-hexoctahedral. The growth and decline of the (111) plane agree with the proposed theory, which is based on a relation between the actual solute concn. and the equil. concn. The mechanism of the crystal growth and decline and supporting illustrations are presented.

## EDUCATIONAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619920016-7"

CH  
RAJHEV, R.

Electrolytic growth of spherical silver single crystals.  
R. Kalachev, E. Budrevski, and J. Malinovski (Institut für Anorganische Chemie der Akademie der Wissenschaften der DDR), Compt. rend. acad. bulgare sci., Ser. math. et nat. 2, No. 2, 59-61 (1940) (in German).—Spherically shaped single crystals of Ag showing the (111), (100), (110), (211), and (801) faces are grown from  $\text{AgNO}_3\text{-HNO}_3$  solns. of various concn. heated to 20-45° using c.d. of 5, 25, 50, 250, and 750 ma./sq. cm. The (111) and (100) faces appear under all conditions of growth, whereas the (211) and (801) faces do not form when c.d. above 250 ma./sq. cm. is used with the higher nitrate-acid concns. The (110) face appears only for higher concns. of the order of 8.8 N  $\text{AgNO}_3$  + 0.5 N  $\text{HNO}_3$ , where low c.d. is used. Gilbert B. Klein

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619920016-7

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619920016-7"

"APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619920016-7

KAISHEV, R.

Kaishev, R. Fizikokhimia. (Sofiya) Nauka i izkustvo (1952) Vol. 1, 242 p.  
(Physicchemistry. Pt. 1. Diagrs.)

SO: Monthly List of East European Accessions, L. C. Vol. 3 No. 1, Jan '54 Uncl.

APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619920016-7"

BULG.

Initial stages of electrolytic deposition of metals. [R.  
Kashry, A. Shalunova, and G. Efimov. *Zh. fiz. khim.*  
1963, v. 37, p. 147 (1963) (In Russian). Original  
summary; cf. C.A., 49, 87147--Nucleation of Ag in  
electrodeposition on a Pt microelectrode ( $10^{-4}$  sq. cm.) from  
 $\text{AgNO}_3$  soln. at  $20^\circ$  was investigated by recording micro-  
graphically the applied voltage while the electrode was  
polarized by a square wave a.c. Value of applied potential  
 $\eta$  at which the first nucleus of Ag deposited was detectable  
from sudden decrease of potential owing to beginning of the  
electrodeposition current. The  $\eta$  was considered equal,  
after a slight correction, to the overpotential, since the  
steady-state potentials of Pt and Ag in  $\text{AgNO}_3$  soln. differed  
only by 4 m.v., and the opposite electrode was 3 sq. cm. Pt.  
The duration of the const. potential impulses was  $5 \times 10^{-3}$   
to  $5 \times 10^{-4}$  sec. It was found that  $\eta$  and  $r$ , where  $r$  was  
the time which passed before the nucleus formed, were re-  
lated by equation  $r = k_1 \exp(-k_2/\eta^2)$ , as expected from the  
fluctuation theory of nucleation. In the present case,  $k_1$   
was 6.03-5.91 and  $k_2$  0.045-0.164. Both were insensitive  
to the electrode prepa. Andrew Dzurilek

"APPROVED FOR RELEASE: 08/10/2001

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THE NEW YORK

APPROVED FOR RELEASE: 08/10/2001

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"APPROVED FOR RELEASE: 08/10/2001

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APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619920016-7"

KHIMIYA, 1957.

BULGARIA / Physical Chemistry. Crystals.

B-5

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 25987

Author : B. Mutafchiyev, R. Kaishev.

Inst : Academy of Sciences of Bulgaria

Title : Electrolytic Formation of Silver Nuclei on Spherical Monocrystalline Platinum Electrodes.

Orig Pub : Izv. B"lgar. AN. Otd. fiz.-matem. i tekhn. n. Ser. fiz.,  
1955, 5, 77 - 88

Abstract : It was revealed experimentally that the formation of Ag nuclei on monocrystalline platinum spherical electrodes took place for the most part near the poles of the octahedron faces. Only single crystal particles are found near the poles of cube faces. The difficulties of a quantitative theoretical interpretation of the obtained results is pointed out, because the slope of the straight lines  $\lg N = 1/E^2$  (where N is the number of the nuclei forming on a unit of the surface in a unit of time, and E is the impulse in-

Card : 1/2

Card : 2/2

HUNGARY/Solid State Physics - Crystallization

E-7

Abs Jour : Ref Zhur - Fizika, No 1, 1959, No 945

Author : Kaischew R.  
Inst : Physico-Chemical Institute, Bulgarian Academy of Sciences,  
Sofia, Bulgaria  
Title : On the Theory of the Speed of Crystallization

Orig Pub : Acta phys. Acad. sci. hung., 1957, 8, No 1-2, 75-81

Abstract : Based on the author's theoretical work (Referat Zhur Fizika, 1957, No 12, 30452) and other data, an expression is found for the speed  $J$  of formation of a two-dimensional nucleus on the face of a crystal that has no defects. At low supersaturations (when  $J$  is small) the formation of each two-dimensional nucleus leads to the appearance of a whole new layer of atoms on the grown face of the crystal. This makes it possible also to obtain an expression for the nonlinear speed of crystallization.

Card : 1/1

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619920016-7"

R. Kaischew, "Zur kinetischen Ableitung der Kristallkeimbildungsgeschwindigkeit," Zeitschrift fuer Elektrochemie (Weinheim), 61/1, 1957, pp. 35-7.

Received on 13 November 1956.  
The author is affiliated with the Physical Institute of the Bulgarian Academy of Sciences, Sofia.

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*ar*

<sup>18</sup>  
J. The theory of crystallization velocity. R. G. M. V. (Phys.-Chem. Inst. Bulgarian Acad. Sci., Sofia). J. Phys. Chem. Soc. Bulg. 10, 104-111 (1957) (in German).-- The growth velocity of the perfect crystal is treated theoretically by using a layer model. By applying the method technique of Becker and Döring (C.A. 39, 1641) to a cubic crystal in a slightly supersatd. vapor an expression is obtained contg. a factor characteristic of the 2-dimensional nucleus. Rate of formation of the nuclei is all-over indepdg. and is given by:  $I = [(so/n)\sqrt{A_1/kT}] \exp(A_1/kT)$ , where  $I$  = rate of formation of nuclei,  $s$  = no. nuclei/cm<sup>2</sup>,  $n$  = no. mols. in edge of nuclei,  $A_1$  = activation energy of formation of 2-dimensional nucleus,  $a = \exp[-(14/kT)]$

// [1 - (1/n<sub>0</sub>)],  $\psi$  = work expended in placing 2 mols. side by side on the surface. Growth is  $fI$ , where  $f$  = surface area.

W. A. Van Heek

PM

KAISHEV, R.; MUTAFCHIEV, B.

Development and origin of crystals during adsorption of alien substances on their surface. Izv Inst khim BAN 7:145-176 '60.  
(KEAI 10:9)

1. Institut po fizikokhimii pri Belgarskata akademii na naukite.

(Crystallization)

KAISHEV, R.  
KAISHEV, R.; MUTAFCHIEV, B.

On the kinetics of forming crystal nuclei on isomorphic nuclei.  
Izv Inst khim BAN 7;177-196 '60. (KKAI 10:9)

1. Institut po fizikokhimii pri BAN.

(Liquids) (Crystallization)

21010

17/5/71  
8/058/62/000/009/018/069  
A006/A101

AUTHOR: Kaishev, R.

TITLE: On some problems in the molecular-kinetic theory of crystal nucleation and growth

PERIODICAL: Referativnyy zhurnal, Fizika, no. 9, 1962, 8 - 9, abstract 9E60  
(In collection: "Rost'kristallov. T. 3", Moscow, AN SSSR, 1961,  
26 - 36, Discussion, 214 - 218)

TEXT: Concepts developed by Fol'mer, Stranski, Kossel and the author are used for a theoretical analysis of some problems connected with the nucleation and growth of crystals out of oversaturated vapor. The distance between two turns of a spiral, developed from a screw dislocation on a cubic crystal face, is calculated. This distance  $d = 4\psi/KT S$ , where  $\psi$  is the severance work of one bond between neighboring atoms,  $\delta$  is the lattice constant,  $S = \ln \frac{P}{P_{\infty}}$  is oversaturation. The equilibrium state of a crystal lying on a structureless backing is studied by the method of average severance work. The analysis leads

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A006/A101

On some problems in the...

to a generalized Gibbs-Woullff law:  $h_1:h_1':h_2:h_2':h_3:\dots = \sigma_1:(\sigma_1-\beta_1):\sigma_2:(\sigma_2-\beta_2):\dots$ , i.e. for an equilibrium crystal, bounding with foreign faces, the distances to the free faces are proportional to their specific surface energies, and the distances to the same faces, contacting foreign faces, are reduced in a  $(\sigma_1-\beta_1)/\sigma_1$  ratio where  $\beta_1$  is the specific adhesion energy. The nucleation rate on a foreign backing is also calculated and the effect of adsorption on the crystal nucleation rate is determined. At increased adsorption the condensation rate increases first and decreases subsequently at high filling coefficients. The method of average severance work is also applied to analyze the growth of mixed crystals.

Yu. Krishtal

[Abstracter's note: Complete translation]

Card 2/2

BUDUROW, St. [Budurov, St.]; KAISCHEW, R. [Kaishev, R.]

On electrocrystallization of lead. Doklady BAN 14 no.7:699-702 '61.

1. Institut fur physikalische Chemie an der Bulgarischen Akademie  
der Wissenschaften.

(Crystallization) (Lead)

KAIISHEV, R. (a-c-d)

#240

- 3/ -

SACLA, Releasable Information Annex - Vol. 2A, No. 7, 1951

(Continued)

29. "Political Events Abroad: French Foreign Policy  
in Europe," [Russian Article], pp. 725-726.
30. "The Effect of Soviet Propaganda on the Foreigner's Opinion of American Power  
[Russian Article], pp. 725-726.
31. "American Competition of Communists Abroad: Asia and  
Non-Communist Far East or Russia," A. A. NIKONOV [Russian Article]  
and I. I. BAKHTEEV [Russian Article] by Comptroller A. A. SUDOVICH [Russian Article].
32. "The Position of Foreigners in France on the Problem  
of Communism," O. A. KARLINSKY [Russian Article] (Quoted by  
Admiral A. J. HANCOCK) [Russian Article], pp. 725-726.
33. "Positive Factors in the Expansion of International Trade in  
Non-Communist Far East," V. V. GORBATYUK [Russian Article] (Quoted by  
Admiral A. J. HANCOCK) [Russian Article], pp. 725-726.
34. "The Development of Economic Cooperation of Soviet Union and  
West Germany," N. GOL'SKAYA [Russian Article] (Quoted by  
Nikolai P. TIKHONOV) [Russian Article], pp. 725-726.
35. "The Pathogenesis of Hemorrhagic Diarrhoea-Virus (Hemorrhagic  
Fever)," I. V. KOTIKOV and T. I. TIKHONOV [Quoted by Admiral  
A. J. HANCOCK] [Russian Article], pp. 725-726.
36. "Quantitative Historical Analysis in Soviet Jurisprudence  
in the Twentieth Century," B. TIKHONOV [Quoted by  
Nikolai P. TIKHONOV] [Russian Article], pp. 725-726.
37. "The American Report on Poland," K. ZEMTSEV and  
P. KONDRATOV [Russian Article] (Quoted by Comptroller Nikolai  
P. TIKHONOV) [Russian Article], pp. 725-726.

KAISHEV, R., akad.

Thermodynamics of the freezing of small liquid drops. Izv Inst fiz khim 2:5-14 '62.

1. Chlen na Redaktsionnata kolegiia i otgovoren redaktor,  
"Izvestiia na Instituta po Fizikokhimii."

KAISHEV, R., akad.; MUTAFCHIEV, B.

Kinetics of the formation of gas nuclei in overheated liquids.  
Izv Inst fiz khim 2:15-129 '62.

KAISHEV, R., akad.; GUTSOV, Iv.

Kinetics of the formation of nuclei in the electrocrystallization  
of iron. Izv Inst fiz khim 2:77-92 '62.

KAISHEV, R., akad.; MUTAFCHIEV, B.

Thermodynamics of the crystal seed formation on the isomorphic condensation nuclei. Izv Inst fiz khim 3 5-24 '63.

1. Institut po fizikokhimiia pri Bulgarskata akademia na naukite.
2. Chlen na Redaktsionnata kolegiia i otgovoren redaktor, "Izvestiia na Instituta po fizikokhimiia" (for Kaishev).

BUDEVSKI, E.; DZHAMBZOVA, M.; KAISHEVA, A.; RANGELOVA, N.

Mechanism of the reduction of chromate ions as tested in  
drop mercury electrode. Izv Inst fiz khim 2:131-144 '62.

MOSTECKY, J.; KAISLER, A.

Analgesic effect of intra-arterial injections of TEAB in diskogenic diseases. Cas. lek. cesk. 101 no.13:555-559 My '62.

1. Interni oddeleni OUNZ Cesky Krumlov, prednosta MUDr. J. Mostecky.  
Interni oddeleni OUNZ Jindrichuv Hradec, prednosta MUDr. J. Herrmann.  
(TETRAETHYLAMMONIUM ther) (INTERVERTEBRAL DISK dis)  
(BACKACHE ther)

KAITAZOV. A.

KAITAZOV. A. The rose worm should not be allowed to spread in our country. p.16.

Vol. 11, no. 7, July 1956

KOOPERATIVNO ZENTRALIE

AGRICULTURE

Sofia, Bulgaria

SO: East European Accession, Vol. 6, No. 3, March 1957

RUMANIA/Human and Animal Physiology - Nervous System.

V-12

Abs Jour : Ref Zhur - Biolog., No 1, 1958, 4501

Author : Elena Kaitel

Inst : -

Title : Some Preliminary Conclusions on Problems of Temperaments

Orig Pub : Rev. ped., 1957, 6, No 1, 75-80

Abstract : No abstract.

Card 1/1

KAITAZOV G.

MITOV, A.; IVANOV, N.; SAVOV, S.; THEODOSIEV, L.; KHRISTOV, G.; IONMOV, S.;  
ASSA, N.; KAITAZOV, G.; DRAGIEV, M.; KRUSEVA, Iu.

Results of investigation in benign leptospirosis in southern Bulgaria.  
Izv. mikrob. inst., Sofia Vol. 3:57-82 1952.

1. Izvursheni v Propedevtichnata vutreshna klinika, v sutherlandstvo  
a Patologo-anatomicchnia i Mikrobiologichniia instituti pri Meditsins-  
kata Akademii I.P.Pavlov, Plovdiv.

(LEPTOSPIROSIS, statistics,  
Bulgaria)

KAITAZOV, G.

MITOV, A., dots.; SAVOV, S.; PANTEV, I.; ASA, N.; TMODOBIV, L.;  
KHRISTOV, G.; KAITAZOV, G.

Epidemiological considerations on carriers of benign leptospirosis  
in Bulgaria. Suvrem. med., Sofia 5 no.2:74-80 1954.

1. Iz Propedevtichnata vutreshna klinika pri Mediteinskata  
akademia I.P.Pavlov, Plovdiv (zav: dots. A.Mitov).

(LEPTOSPIROSIS, epidemiology,

\*Bulgaria, carriage by rodents)

(RODENTS,

\*transm. of leptospirosis in Bulgaria)

KAITSAKOV, A.G.

Dilishan as mountain climatic station for tuberculosis.  
Probl. tuberk., Moskva No.5:74 Sept-Oct 1953. (GLINL 25:5)

1. Of Dilishan Tuberculosis Sanatorium (Head Physician ---  
H.A. Babalyan).

KAI'YANOV, V.N., inzh.; SERDYUKOV, G.V., inzh.

Zhdanov conference on welding and cutting. Svar. proizv. no.8:  
43-44 Ag '64. (MIRA 17:9)

KAIZER, D.

Yugoslavia (430)

Technology-Periodicals

Power stations operated by sugar factories in the general power distribution system. p. 21.  
ELEKTOPRIVREDA. (Savet za energetiku i ekstraktivnu industriju) Beograd. (Monthly Journal on power and extractive industry issued by the Board of Power and Extractive Industry; with English, French, or Russian summaries). Vol. 3, Nos. 11 (A-E) - 12 (A-E), Nov.-Dec. 1952.

East European Accessions List, Library of Congress,  
Vol. 2, No. 6, June 1953. Unclassified.